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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/318,249 05/25/99 FURNAS

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EXAMINER

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ART UNIT

PAPER NUMBER

2878

DATE MAILED:

06/12/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/318,249

Applicant(s)

FURNAS, WILLIAM J.

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Office Action is in response to amendments and remarks filed April 9, 2001.  
Claims 1-7 are currently pending.
2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on April 16, 2001 have been approved.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 13-14, it is unclear in its given context how "a rate of change.. would be identified as a defect"? It is also unclear if "a light blocking defect" and "a defect" refer to the same defect. Furthermore, in lines 15-18, it is unclear how comparing neighboring pixels can exhibit a "rate of change in brightness level." Comparing neighboring pixels simply shows a difference or similarity in the shade or color of the pixels, not a "rate of change." The term "rate of change" implies the brightness changing over time, however, simple comparison between neighboring pixels lacks the time element required for the use of the term "rate of change." Thus, it is unclear what Applicant intends to claim.

Claims 2-7 are indefinite by virtue of their dependency on an indefinite claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Juvinall et al. (U.S. Patent 4,601,395).

Regarding claim 1, Juvinall et al. disclose (see Figure 1) a machine for inspecting the wall of a bottle comprising: a conveyor (12, 18) for supporting a bottle at an inspection station, the inspection station including: (see Figure 2) a CCD camera (42) on one side of the conveyor having a camera image; a light source (52), having an illumination area, on the other side of the conveyor, for imaging the bottle on the CCD camera; means for defining (52, 48, 50, 57) on the illumination area light intensities between (see Figure 4A) a minimum brightness level that will permit the identification of a light blocking defect and a maximum brightness level, the brightness level varying spatially, cyclically, and continuously at a rate of change which is less than a rate of change that would be identified as a defect; and (see Figure 2) computer means (56) for analyzing the camera image by comparing neighboring pixels (see column 4, lines 65-68 and column 5, lines 1-5) to determine the rate of change in brightness level to

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identify defects where the rate of change exceeds a defined value (see column 6, lines 20-68).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juvinall et al.

Regarding claims 2 and 3, Juvinall et al. disclose (see Figure 2) an incandescent light source (52). However, LEDs are notoriously well known in the art. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use rows of LEDs in the apparatus of Juvinall et al. in order to provide a more efficient device. Juvinall et al. further disclose a cyclically continuous varying light intensity obtained with the rotation of the bottle and a light gradient. The configuration has with a diffuser plate (48) producing a minimum brightness (62a), an intermediate brightness (60a) and a maximum brightness row (58a). Juvinall et al. not disclose using the light source to define light rows. However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made provide the varying light rows as claimed in order to eliminate rotation of the bottle for increased throughput.

Regarding claims 4 and 5, Juvinall et al. further disclose (see Figure 4A) the intensity being uniformly reduced or increased from the maximum brightness row to the minimum brightness row (62a, 60a, 58a).

Regarding claims 6 and 7, Juvinall et al. disclose (see Figure 4A) rows having brightness levels of approximately zero percent (62a), 50 percent (60a) and 100 percent (58a); the maximum brightness row being remote from the minimum brightness row. The exact percentages would have been a matter of design choice. Further, it would require only routine skill in the art to choose brightness levels in the apparatus of Juvinall et al. to obtain a desired optimal detection result.

### ***Response to Arguments***

9. Applicant's arguments filed April 9, 2001 have been fully considered but they are not persuasive. Applicant asserts that claim 1 provides a light source having a variety of intensities. Examiner disagrees, claim 1 claims a light source having an illumination area and a means for defining on said illumination area light intensities. The rejection as set forth above is proper because Juvinall et al. do teach the invention as claimed.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (703) 305-0539. The examiner can normally be reached on Monday-Friday from 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seungsook Ham, can be reached on (703) 308-4090. The fax phone number for the organization where the application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl

June 11, 2001



Que T. Le  
Primary Examiner